

Serial No. 09/914,279

RECEIVED
CENTRAL FAX CENTER

JUN 27 2008

REMARKS

As an initial matter, the Examiner is thanked for the courtesy of an interview extended to the undersigned on June 5, 2008.

Status of the Claims

1-6, 8-12, 14-50 and 55-70 are pending herein, claim 11 having been canceled herein (claims 7, 13 and 51-54 were previously canceled).

Claims 1-6, 8-12, 14-33, 55-68 and 70 are under examination.

Claims 34-50 and 69 have been withdrawn by the Examiner.

Claims 1-6, 8-12, 62, 64 and 67 are presently rejected.

Claims 14-18, 22-33, 50-61, 63, 65, 66 and 68 are objected to.

Claim rejection under 35 USC §112, first paragraph, written description

Claims 2-5 are rejected under 35 USC §112, first paragraph, written description requirement.

The specification is alleged to provide inadequate support for a) a particle size less than 1 micron and b) the absence of polyoxyporpylene-polyoxyethylene block copolymer.

This rejection is respectfully traversed, because the claim limitations at issue are found, for example, in the last paragraph on page 9 of the originally filed specification.

Reconsideration and withdrawal of this rejection are requested.

Claim rejection under 35 USC § 102(b)

Claims 1-6, 8-12, 19-21, 62, 64 and 67 are rejected under 35 USC § 102(b) as being anticipated by Hara et al., *Proc. Natl. Acad. Sci. USA*, Vol. 94, pp. 14547-14552 (Hara). This rejection is traversed.

Claims 62, 64 and 67

As an initial matter, it is noted that independent claims 55 and 56 have not been rejected in view of the prior art and in fact are objected to as being dependent upon a rejected based claim.

Claims 62, 64 and 67 *depend directly or indirectly from objected to claims 55 and 56*. Thus, it is

Serial No. 09/914,279

respectfully submitted that these claims should have been objected to, rather than being rejected in view of the prior art. Accordingly, it is believed that claims 62, 64 and 67 are allowable.

Claims 1-6, 8-12, 19-21

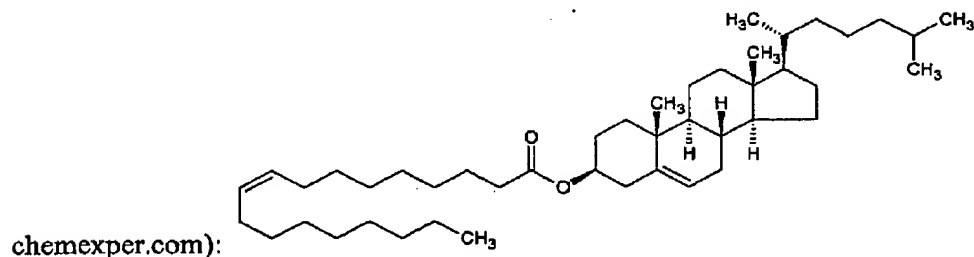
As noted previously in response to the non-final Office Action mailed November 30, 2006, according to the procedure of Hara, negatively charged DNA was first complexed with a cationic lipid containing a quaternary amine head group (i.e., TC-Chol, 3-b-[N-(N9,N9,N9-trimethylethane)carbamoyl]-cholesterol). See Abstract and page 14548. The resulting hydrophobic complex was extracted by chloroform and then incorporated into reconstituted chylomicron remnant particles (RCR), which are composed of olive oil (a lipid), L- α -phosphatidyl choline (a zwitterionic phospholipid), L- α -lysophosphatidyl choline (a zwitterionic phospholipid), cholesteryl oleate (a lipid), and cholesterol (a lipid). *Id.*

Thus, the particles of Hara comprise (a) negatively charged DNA, (b) lipids (olive oil, cholesterol, cholesteryl oleate), (c) a cationic lipid (TC-Chol) and (d) zwitterionic phospholipids (L- α -phosphatidyl choline, L- α -lysophosphatidyl choline).

It was further noted that each of the above species is either charged or a lipid, and that none of the above is a non-ionic detergent as required by independent claims 1, 2, 4-6, 8 and 12 (and claims 3, 9, 10, 19-21 dependent thereon).

The Office had stated in the non-final Office Action mailed November 30, 2006 that the limitation of a non-ionic detergent is met by cholesteryl oleate.

Applicant responded by pointing out the cholesteryl oleate is actually a lipid, and not a non-ionic detergent. This is clear from the structure of cholesteryl oleate (downloaded from



Further evidence that cholesteryl oleate is a lipid, rather than a non-ionic detergent, was provided based on two references (a) D.L.H. Rail et al., "Differential Contributions of Major Lipid Components of Atheroma to Outcome of Cerebral Atheroembolism," *Stroke*, Vol. 12, No. 4, July-August 1981,

Serial No. 09/914,279

445-453, and (b) J.M. Smaby et al., "Properties of cholesteryl oleate and triolein in mixed monolayers at the air-water interface," *Journal of Lipid Research*, Volume 19, 1978, 325-331. It was further pointed out that many other articles referring to cholesteryl oleate (or its synonym cholesterol oleate) as a lipid can be found, for instance, by searching PubMed at nih.gov. As one example, see, e.g., the Abstract of T. Takino et al., *Biol Pharm Bull.* 1994 Jan;17(1):121-5 which refers to cholesterol oleate as "highly lipophilic".

The Examiner had previously responded by first correctly noting that, as defined by applicant, the term "detergent" to "includes surfactants and emulsion stabilizers". The Examiner then, however, concluded that cholesteryl oleate "can be considered an emulsion stabilizer." The Examiner, however, did not put forward any evidence in support of his conclusion that cholesteryl oleate, which is a lipid, can function as an emulsion stabilizer. Applicant pointed out that, due to its highly lipophilic nature, it is not seen how cholesteryl oleate could possibly be considered an emulsion stabilizer, and there is no evidence of record that would support such a conclusion.

In the present Office Action, the Examiner points out that the claims set forth an "emulsifying agent," rather than an emulsion stabilizer. This is true in the sense that the claims are directed to an emulsifying agent that "comprises an anionic detergent and a non-ionic detergent." Applicant's previous arguments however, focused on the term "non-ionic detergent" in the claims, rather than "emulsifying agent." Regardless, due to its highly lipophilic nature, it is not seen how cholesteryl oleate could possibly be considered an emulsifying agent, and there is no evidence of record that would support such a conclusion.

For at least the above reasons, claims 1-6, 8-10, 12, 19-21 are believed to be patentable over Hara.

Further more, in claim 4, the metabolizable oil is a terpenoid selected from squalene, squalane and mixtures thereof, which is not taught or suggested by Hara.

In claim 8, the non-ionic detergent is selected from polyoxyethylene sorbitan monoesters, polyoxyethylene sorbitan diesters, polyoxyethylene sorbitan triesters, sorbitan monoesters, sorbitan diesters and sorbitan triesters, which is not taught or suggested by Hara.

Claim 12 requires an anionic detergent, which is not taught or suggested by Hara.

Claim 11 has been cancelled.

RECEIVED
CENTRAL FAX CENTER

JUN 27 2008

Serial No. 09/914,279

Reconsideration and withdrawal of the rejection of claims 1-6, 8, 12, 19-21, 62, 64 and 67 under 35 USC § 102(b) are therefore requested.

Claim Objections

Claims 14-18, 22-33, 55-61, 63, 65 and 66 are objected to as being dependent upon a rejected based claim.

This is not understood. In particular, 14, 22, 23, 25, 55 and 56 are in independent form and are not dependent from a rejected based claim. Claims 15-18, 24, 26-33, 57-61, 63, 65, 66 and 68 depend directly or indirectly from independent claims 14, 22, 23, 25, 55 or 56 and thus do not depend from a rejected based claim.

Thus, it is believed that claims 14-18, 22-33, 55-61, 63, 65 and 66 are in condition for allowance.

Moreover, claims 62, 64, 67, 68 and 70 depend directly or indirectly from independent claims 55 and 56 and are therefore believed to be in condition for allowance as well.

CONCLUSION

It is respectfully submitted that all claims are presently in condition for allowance. Should the Examiner be of the view that an interview would expedite consideration of the application, request is made that the Examiner telephone the Applicants' attorney at (703) 433-0510 in order that any outstanding issues be resolved.

If there are any fees due and owing in respect to this amendment, the Examiner is authorized to charge such fees to deposit account number 50-1047.

CORRESPONDENCE

Please direct all correspondence to:

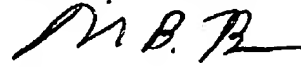
Novartis Vaccines and Diagnostics, Inc. (formerly Chiron Corporation)
Intellectual Property Department X-100B
P.O. Box 8097
Emeryville, CA 94662-8097

Serial No. 09/914,279

RECEIVED
CENTRAL FAX CENTER

JUN 27 2008

Respectfully submitted,



David B. Bonham
Registration No. 34,297

Attorney for Applicant
Mayer & Williams PC
251 North Avenue West, 2nd Floor
Westfield, NJ 07090
Tel.: 703-433-0510
Fax: 703-433-2362

Certificate of Facsimile Transmission

I hereby certify that this document and any document
referenced herein is being sent to the United States Patent and
Trademark office via Facsimile to: 571-273-8300 on

6/27/2008



David B. Bonham

Printed Name of Person Mailing Correspondence